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Claims

[c1] I claim: 1. A rotor assembly that is mounted on a hub which is retained on an axle of a vehicle, said rotor assembly includes a radial disc and an exciter ring through which a sensor detects the rotation of the radial disc with respect to the axle, said a radial disc that is offset from a mounting flange fixed to said hub by a cylindrical body and has a first surface that functions as a first friction face and a second surface that function as a second friction face when respectively engaged by first and second friction members to attenuate the rotation of said radial disc during a brake application, said first and second friction members on engagement with said first and second friction faces generating thermal energy that is carried from said radial disc through said cylindrical body and into said mounting flange, said radial disc reacting to a predetermined thermal energy level by moving out of a perpendicular alignment with said hub, said exciter ring being characterized by a cylindrical member having a first end and a second end with a sensor flange thereon, said first end being concentrically retained in said cylindrical body of said rotor such that an axial lip on said sensor flange engages said radial disc to define a

gap between said sensor flange and said radial disc, said sensor flange having a plurality of first and second reluctance sections located thereon that are aligned with said sensor to provide a signal corresponding to the rotation of said rotor, said gap allowing said radial disc to move independently of said sensor flange such that said plurality of first and second reluctance sections remain aligned with said sensor with changes in the perpendicular alignment of the radial disc and said hub and said signal remains as an accurate indication of rotation.

[c2] 2. The rotor assembly as recited in claim 1 wherein said plurality of first and second reluctance sections is defined by radial slots in said sensor flange through which said signal generated corresponds to the rotation of the said rotor.

[c3] 3. The rotor assembly as recited in claim 2 wherein said radial slots extend from an inner peripheral face on said cylindrical member toward said lip on said sensor flange.

[c4] 4. The rotor assembly as recited in claim 3 wherein said radial slots define passages that allow any moisture present in said gap to be expelled into the environment and thereby reduce the possibility of oxidation of the exciter ring.

[c5] 5. The rotor assembly as recited in claim 2 wherein said radial slots define passages that would reduce the possibility of any friction dust developed during a brake application from accumulating and being retained in said gap.

[c6] 6. The rotor assembly as recited in claim 3 wherein said cylindrical member is secured to said cylindrical body of said rotor by a plurality of fasteners that extend through said cylindrical member adjacent said first end and into said cylindrical body.

[c7] 7. The rotor assembly as recited in claim 5 wherein said mounting flange is fixed to said hub through a second plurality of fasteners to initially establish said perpendicular alignment between said radial disc and said hub.

[c8] 8. A rotor assembly mounted on a hub that is retained on an axle of a vehicle, said rotor assembly including a radial disc that is offset from a mounting flange that is fixed to said hub by a cylindrical body and an exciter ring through which a sensor detects rotation of the radial disc with respect to the axle, said radial disc having a first surface that functions as a first friction face and a second surface that function as a second friction face that are respectively engaged by first and second friction members to attenuate the rotation of said radial disc,

said first and second friction members on engagement with said first and second friction faces generating thermal energy that is carried from said radial disc toward said mounting flange through said cylindrical body, said radial disc reacting to a predetermined thermal energy level by being distorted from perpendicular alignment to non-perpendicular alignment with respect to said hub, said exciter ring being characterized by a cylindrical member having a first end that is concentrically aligned within said cylindrical body of said rotor assembly to define a gap between a face on an outwardly extending flange on a second end thereof and said radial disc, said outwardly extending flange having a plurality of reluctance sections located thereon that are aligned with said sensor through which said sensor obtains information relating to the rotation of said radial disc, said gap allowing said radial disc to move independently with respect to said outwardly extending flange such that said plurality of reluctance sections remain aligned with said sensor whenever said radial disc changes from perpendicular to non-perpendicular alignment with respect to said hub.

[c9] 9. The rotor assembly as recited in claim 8 wherein said first end of said cylindrical member is further characterized by an inwardly extending flange, said inwardly ex-

tending flange being fixed to said hub by a plurality of fastener members.

[c10] 10. The rotor assembly as recited in claim 9 wherein said length of said cylindrical member with respect to said cylindrical body defines a width of said gap, said gap being of such width that said radial disc may move without touching said outwardly extending flange.

[c11] 11. The rotor assembly as recited in claim 10 wherein said first and second reluctance sections are defined by a plurality of radial slots in said radial flange, said radial slots extending from a peripheral face on said cylindrical member toward a peripheral face on said flange such that any moisture in said gap may be expelled into the surrounding environment to reduce the possibility of oxidization forming on said exciter ring that could effect the sensor signal.

[c12] 12. The rotor assembly as recited in claim 11 wherein said first end of said cylindrical member is further characterized by being resiliently retained against a stop within said cylindrical body to define a space relationship between said outwardly extending flange and said radial disc to establish said gap.

[c13] 13. The rotor assembly as recited in claim 8 further in-

cluding fastener means through which said cylindrical member is retained within said cylindrical body.

[c14] 14. The rotor assembly as recited in claim 13 wherein said first and second reluctance sections are defined by a plurality of radial slots in said radial flange, said radial slots extending from a peripheral face on said cylindrical member toward a peripheral face on said flange such that any moisture or dust is not retained in said gap but expelled into the surrounding environment to reduce the possibility of retension that may effect the sensor signal.